

FIG. 1

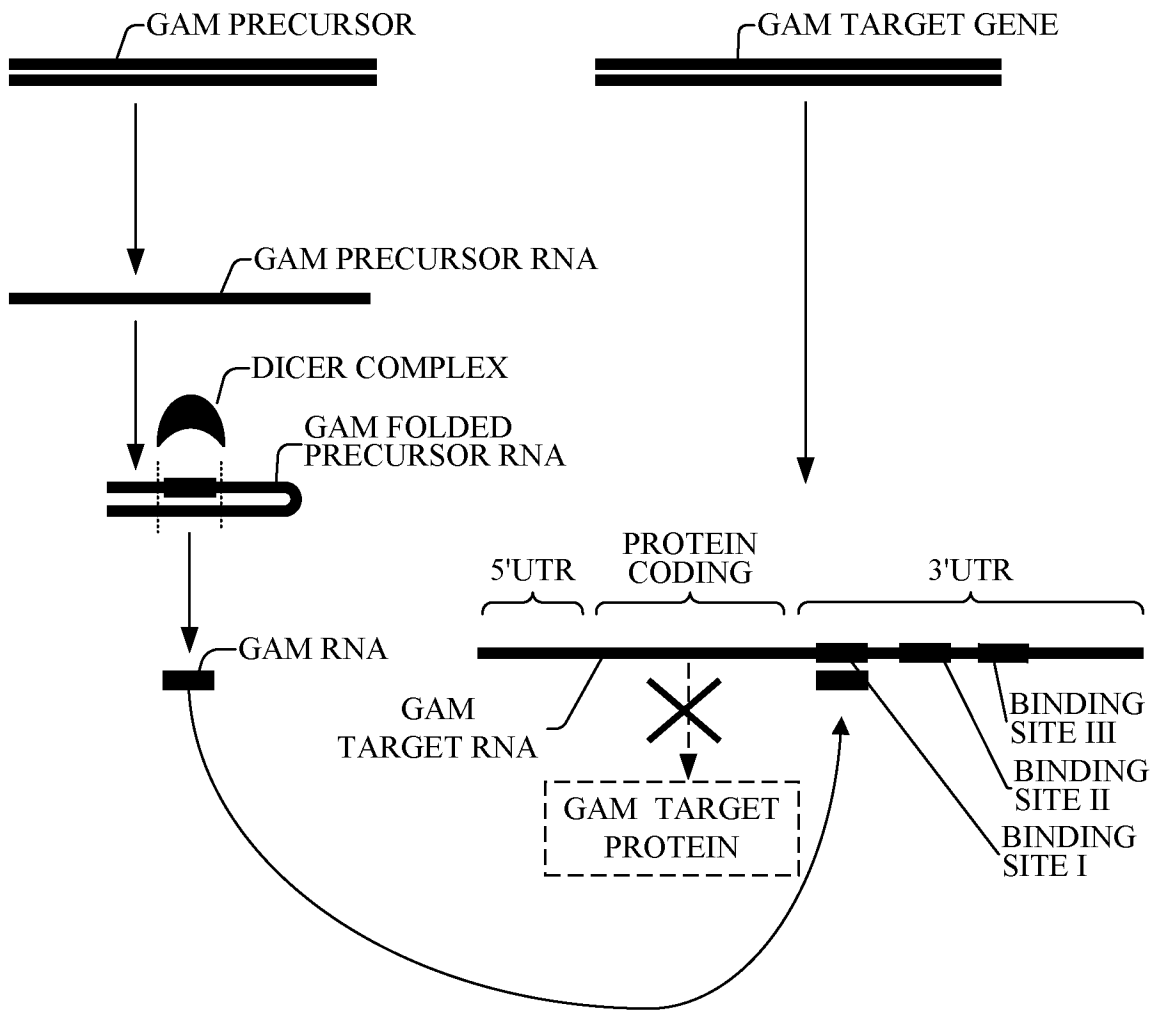


FIG. 2

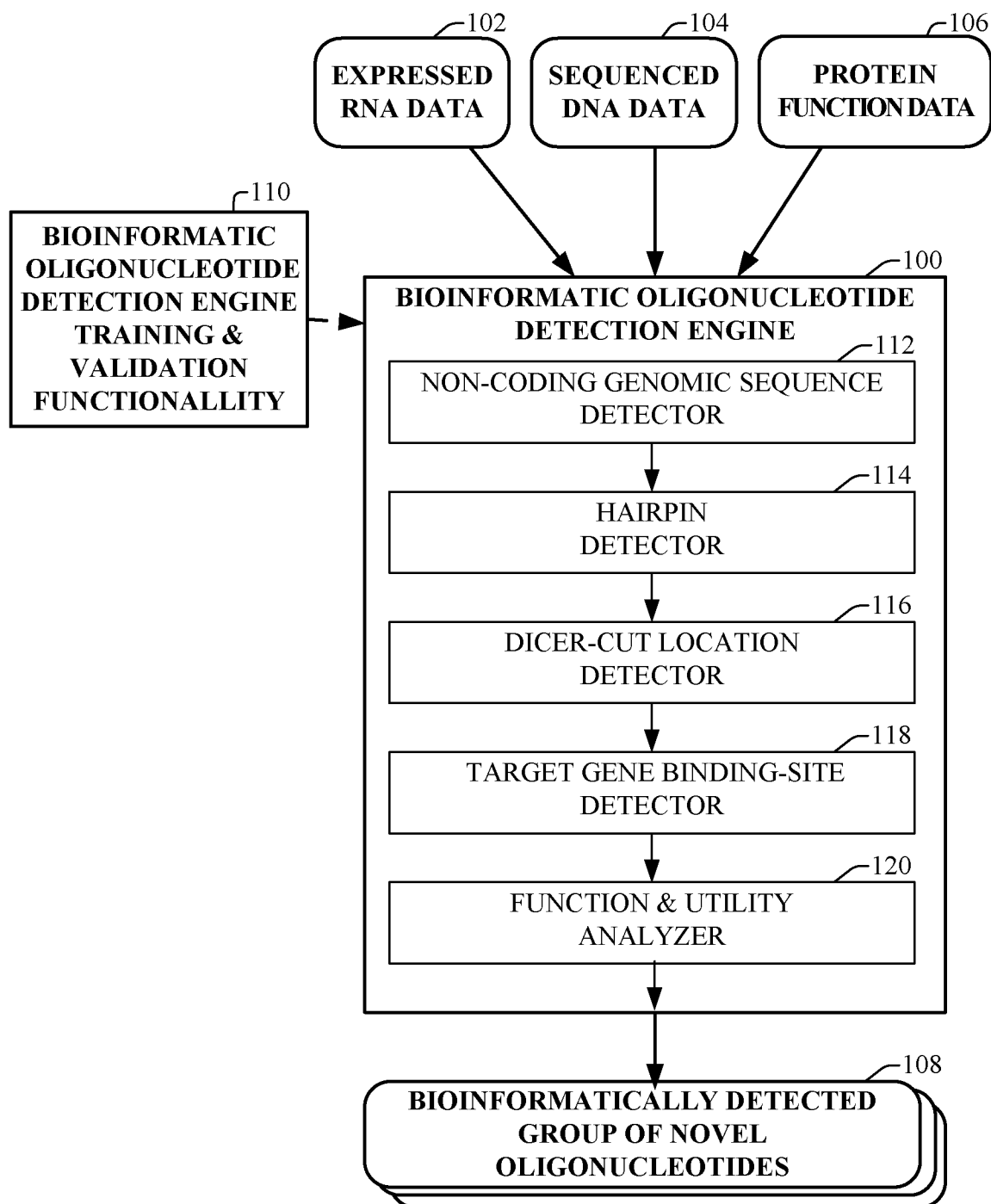


FIG. 3

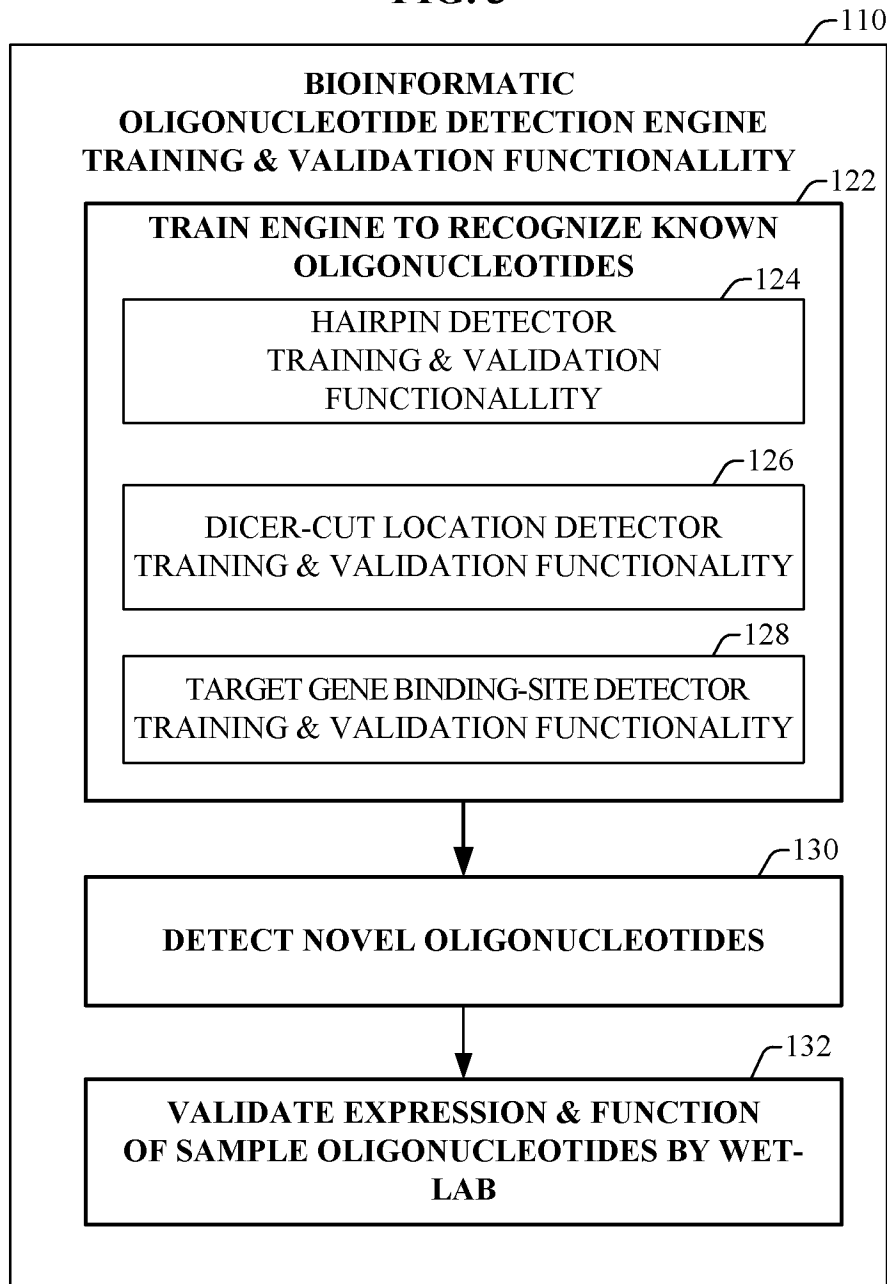


FIG. 4A

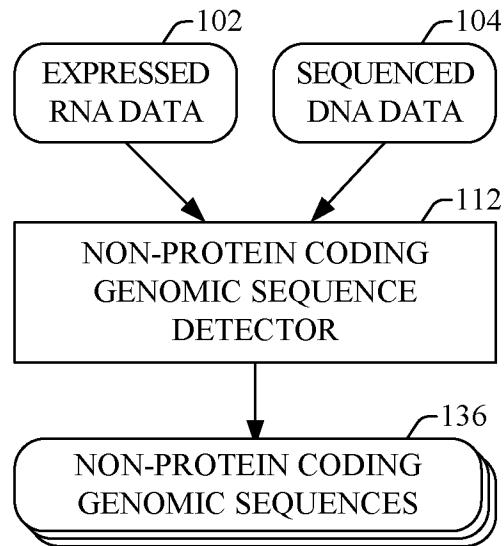


FIG. 4B

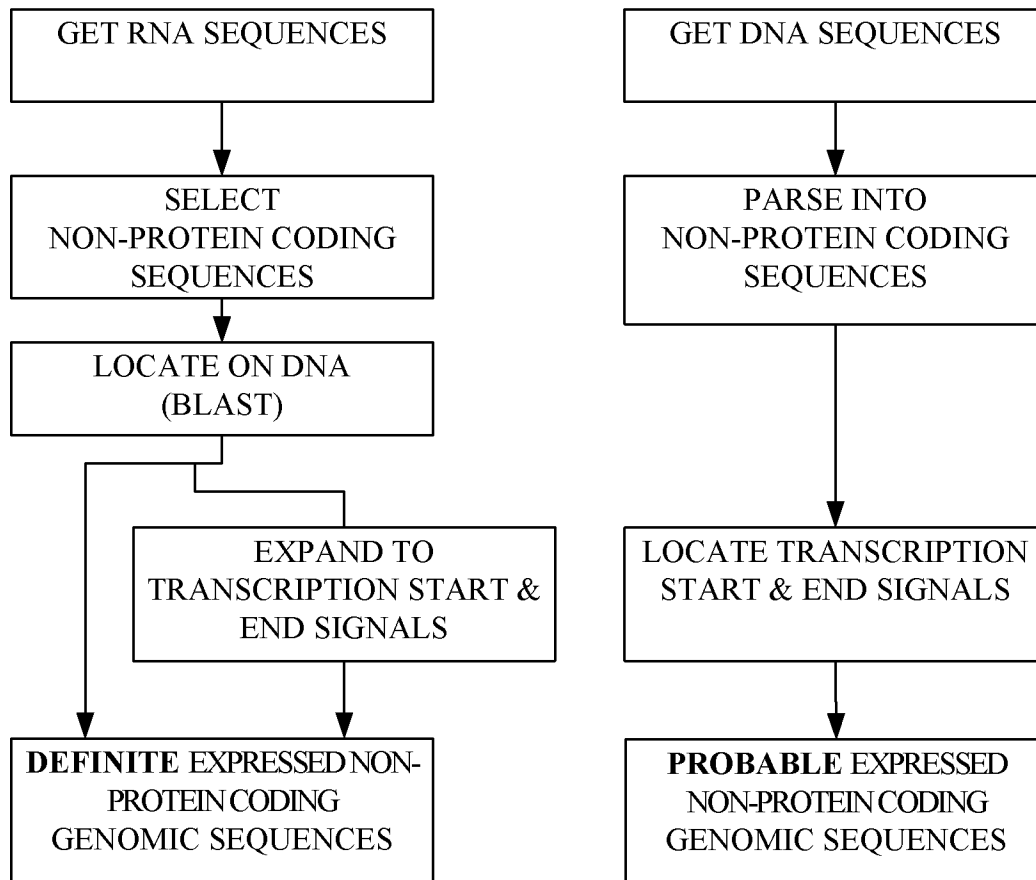


FIG. 5A

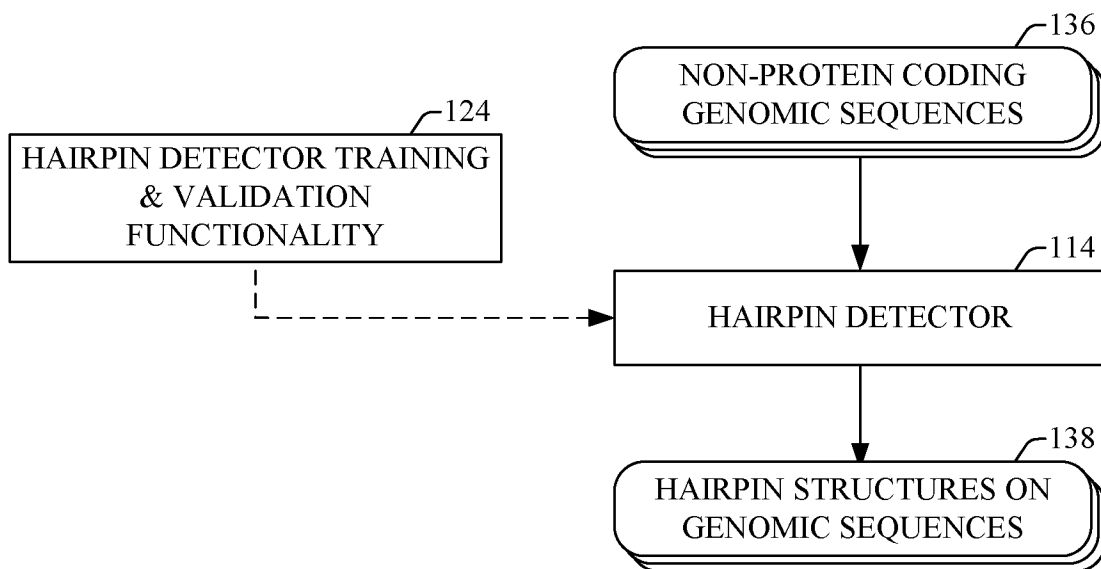


FIG. 5B

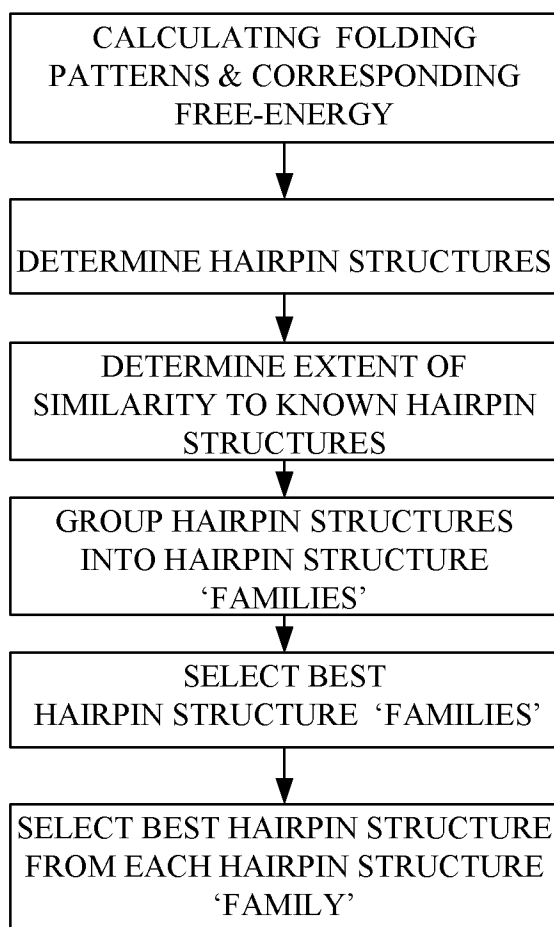


FIG. 6A

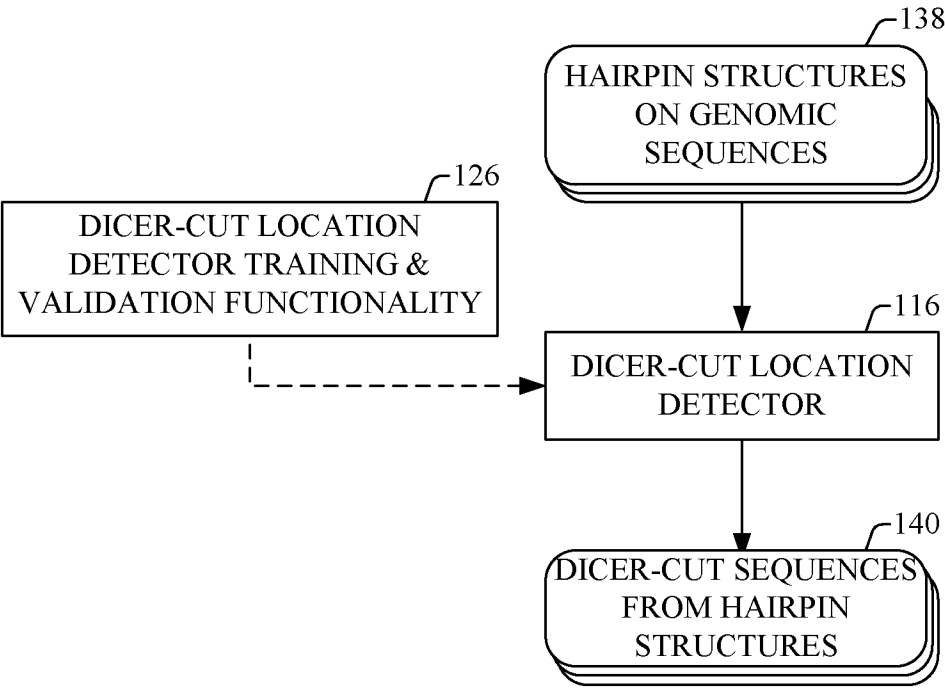


FIG. 6B

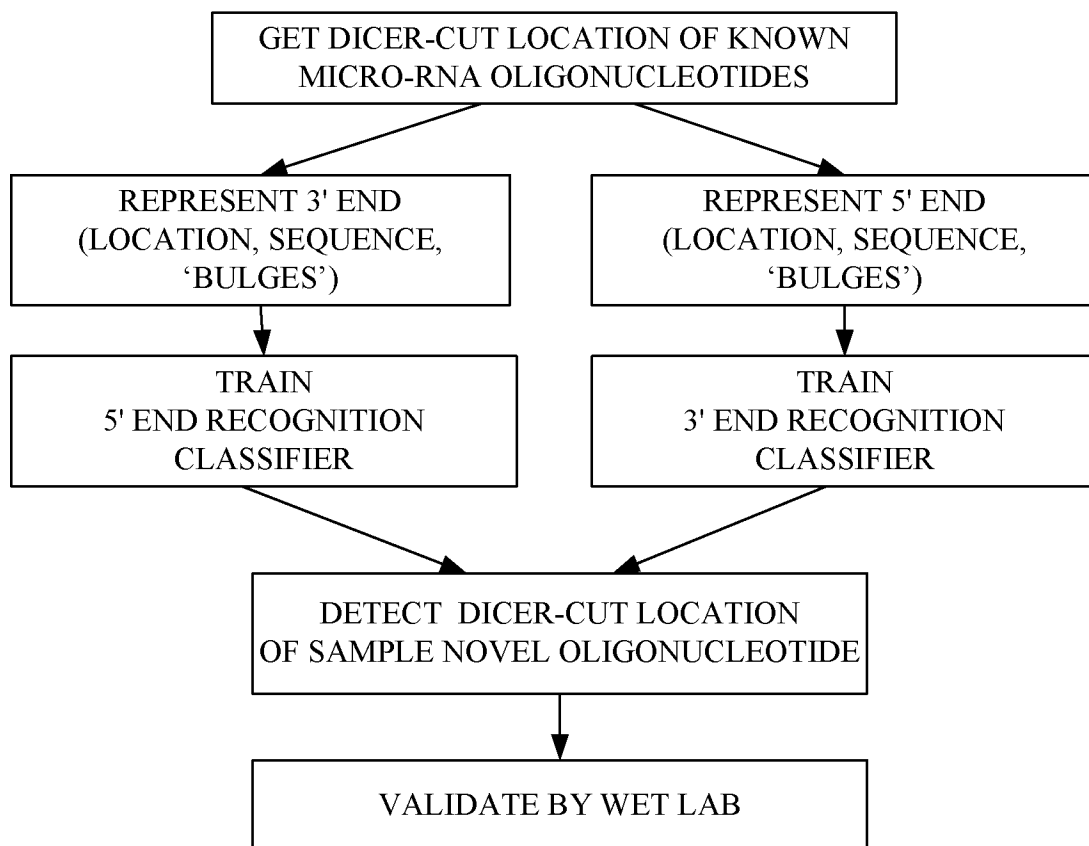


FIG. 6C

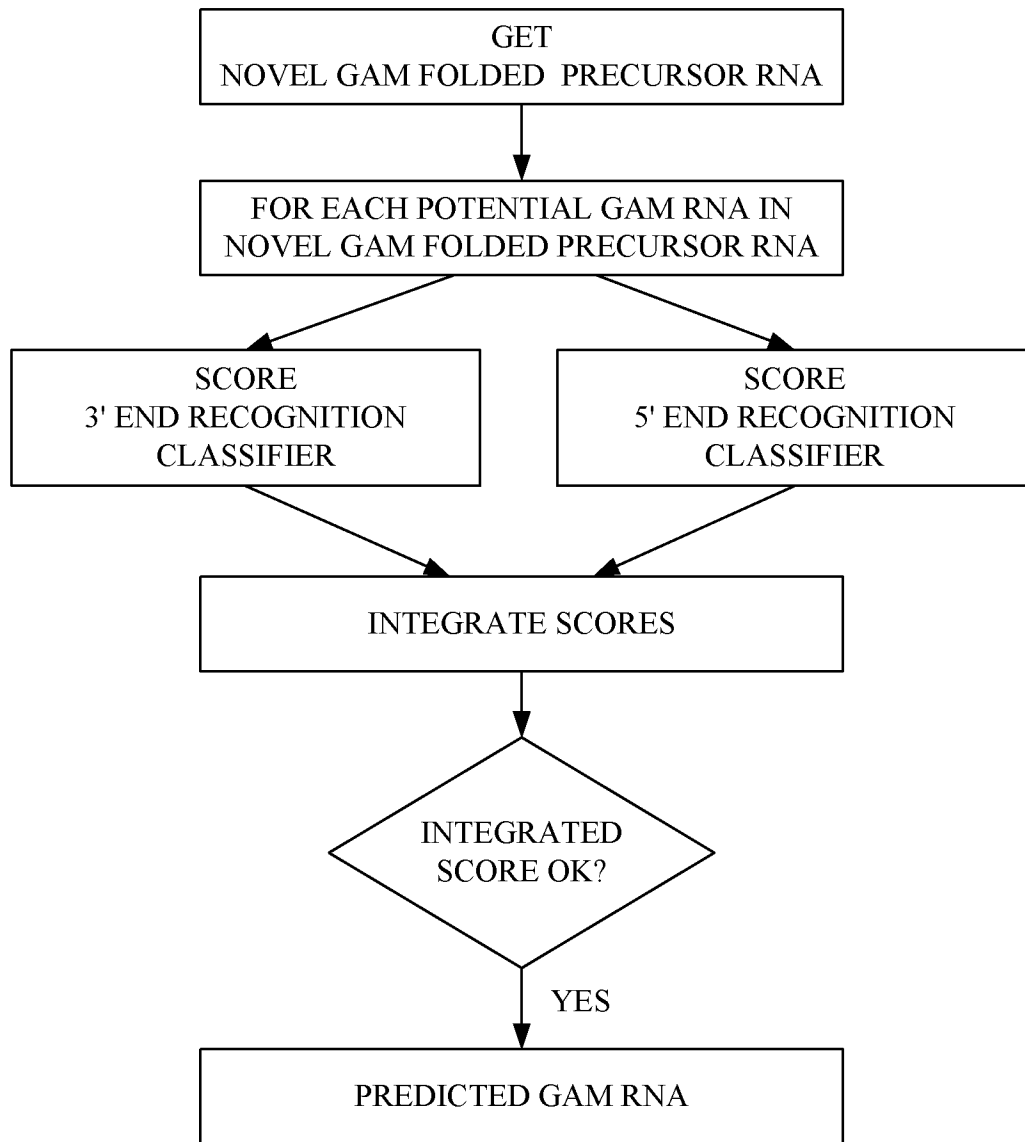


FIG. 7A

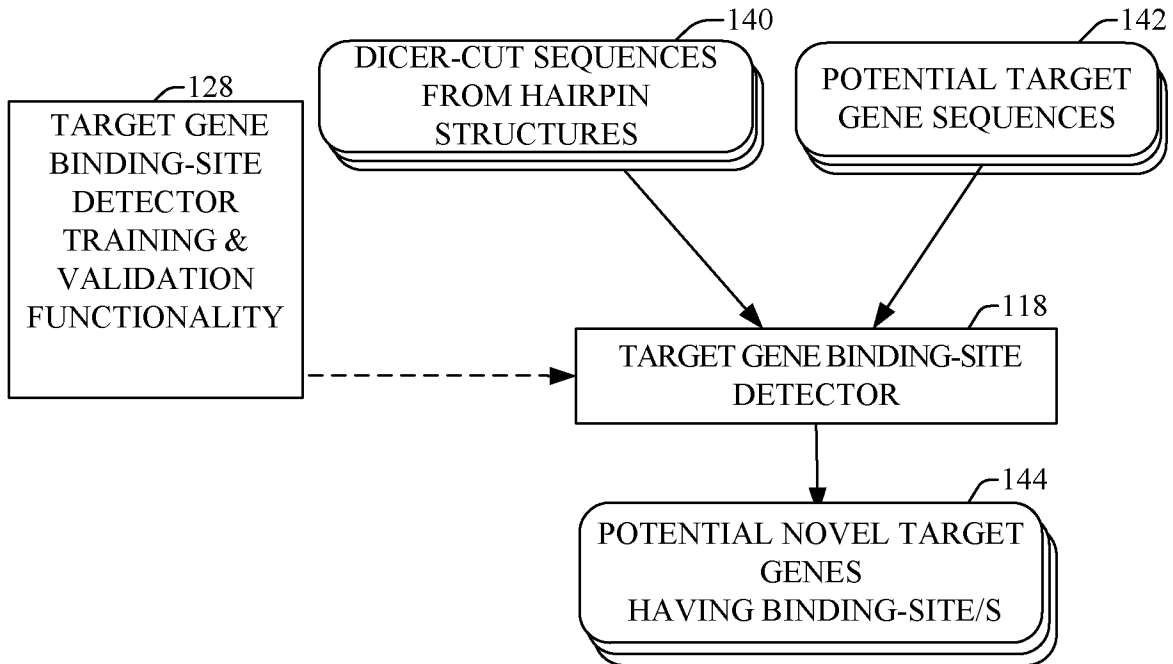


FIG. 7B

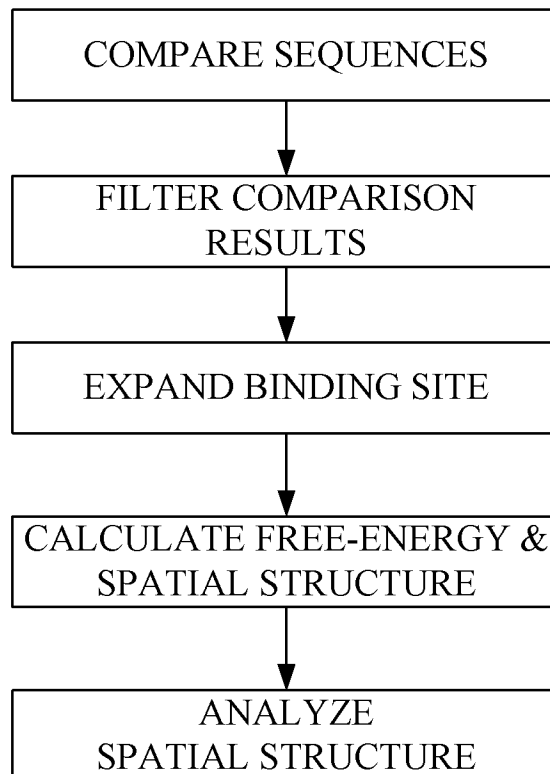


FIG. 8

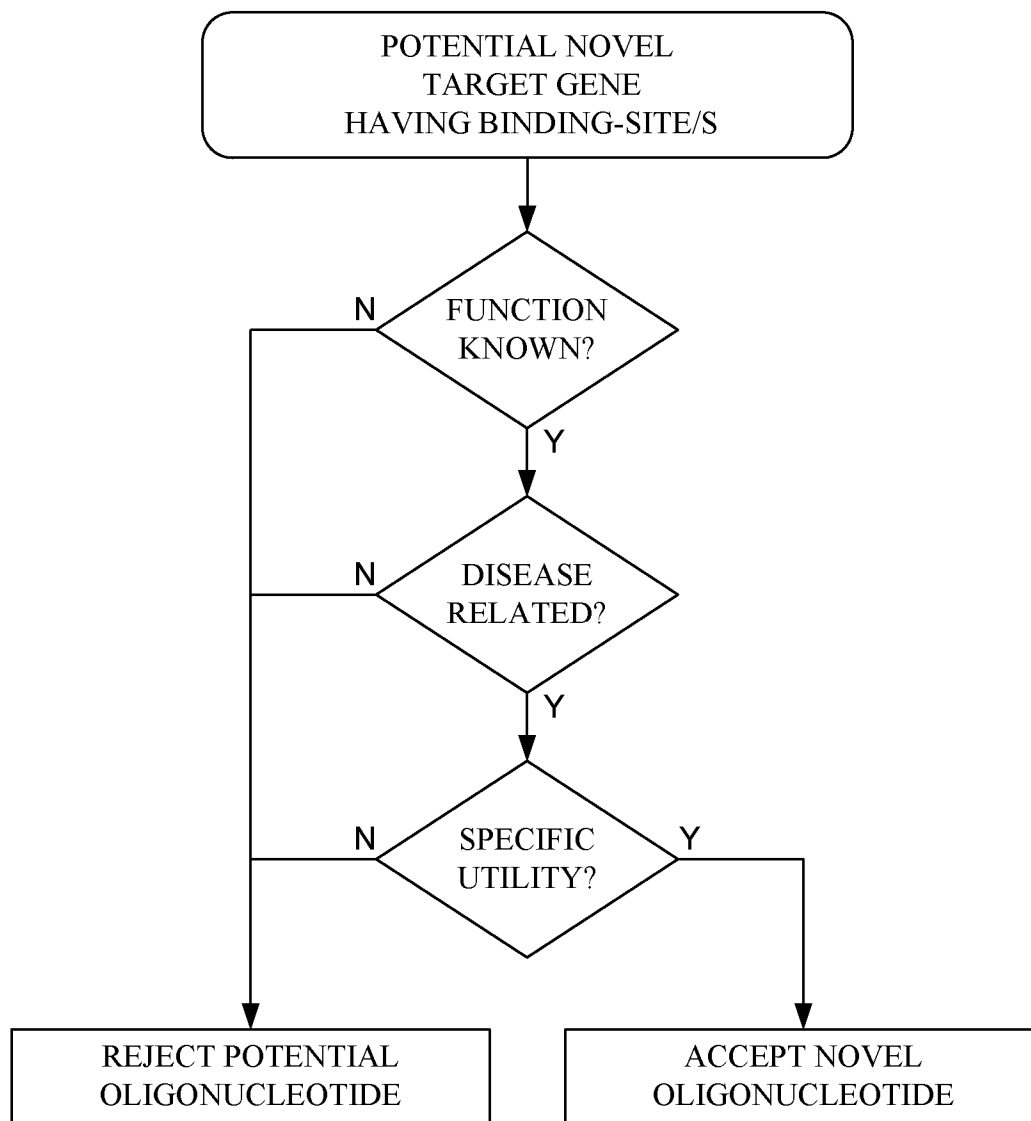


FIG. 9

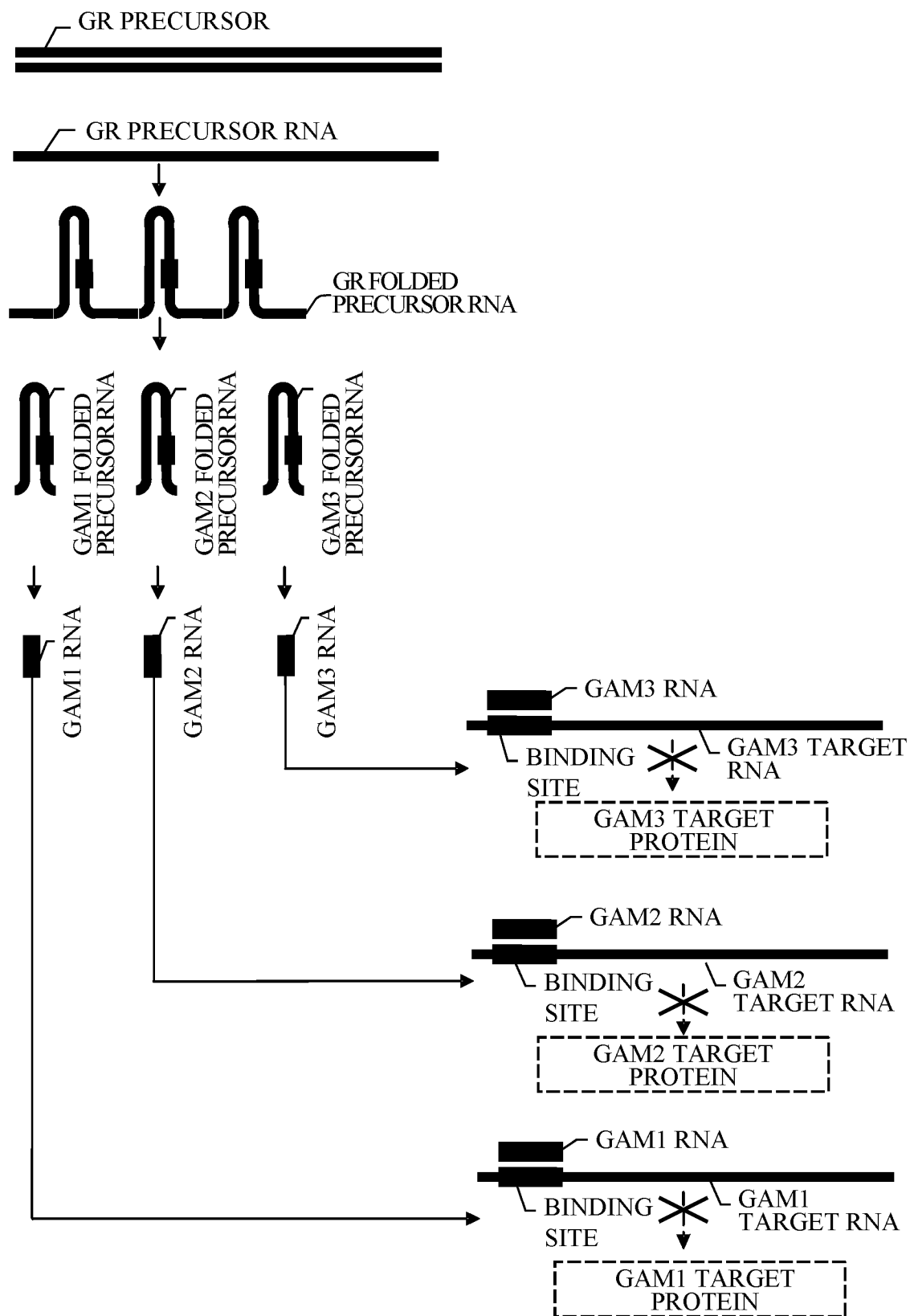


FIG. 10

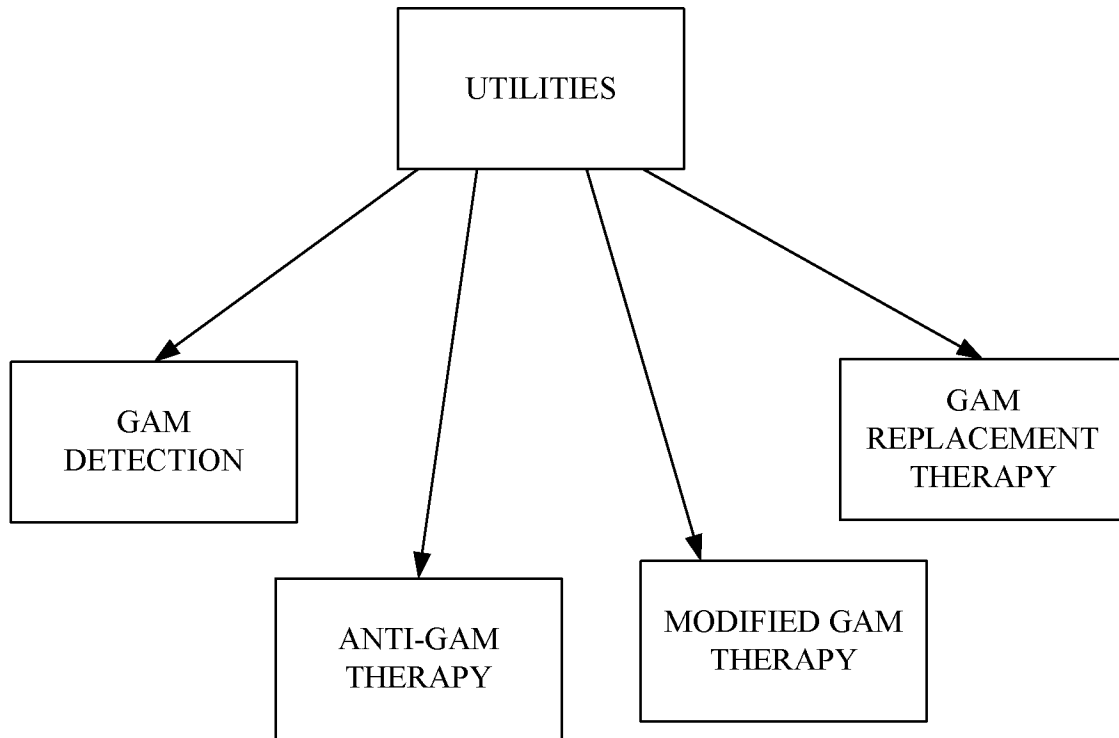


FIG. 11A

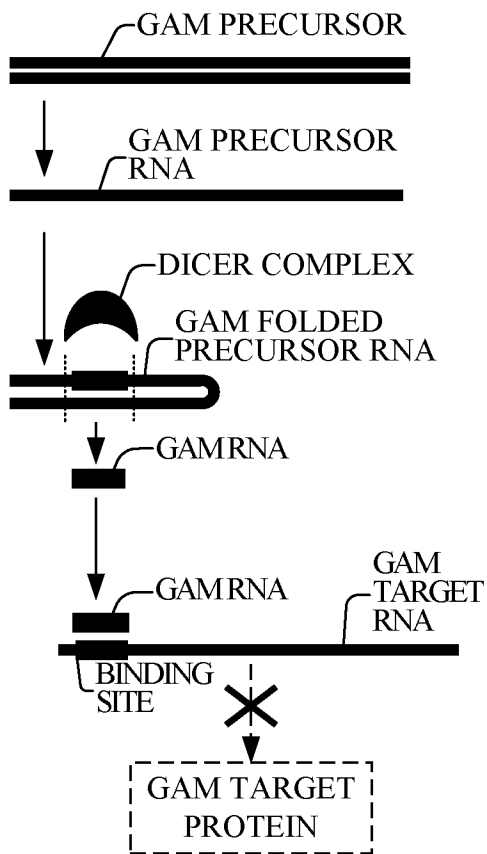


FIG. 11B

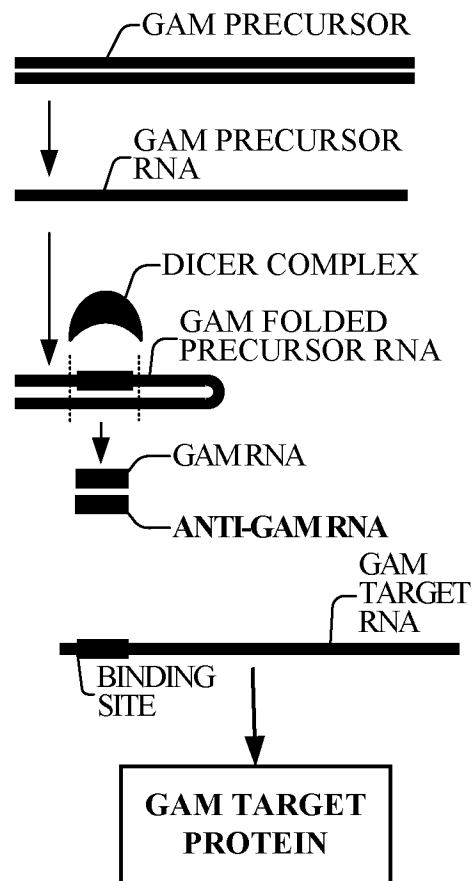


FIG.12A

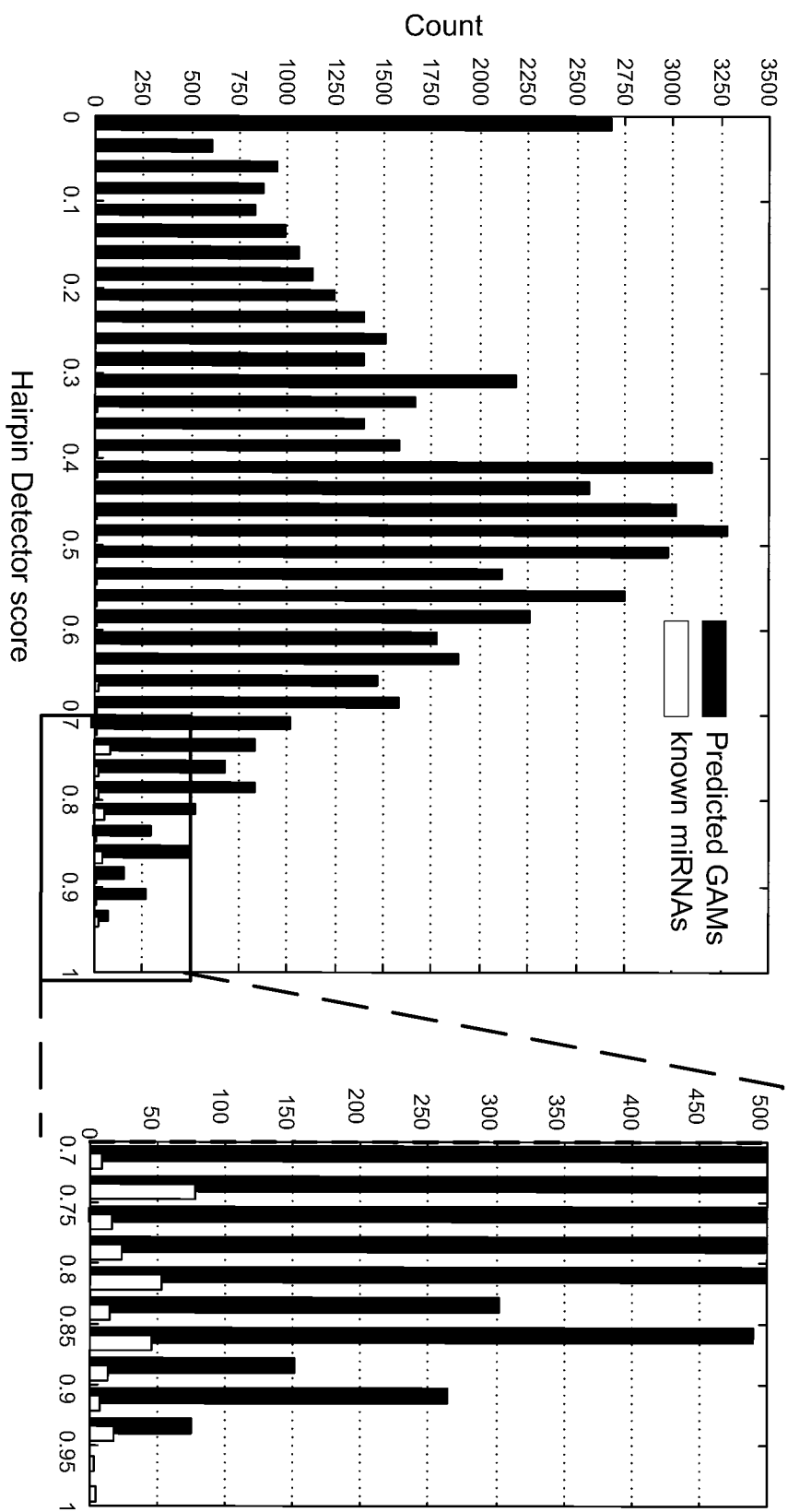
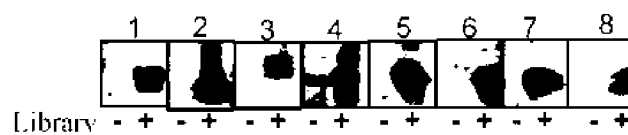


FIG. 12B

GAM Detection Group	Published Hairpins Detection	Background Hairpins Filtering	Lab Validation of Human GAMs		
			Sent	Positive	% Success
A	382	~2850000 (95 %)	101	37	37%
Overall	440	~3000000	168	52	31%

FIG. 13A

KNOWN MIRS



PREDICTED GAM
OLIGONUCLEOTIDES:

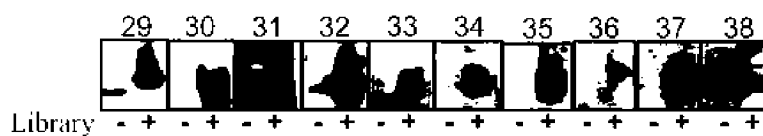
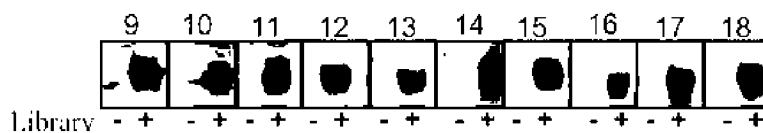


FIG. 13B

NUMBER	NAME	SEQUENCE (5 TO 3)	SEQUENCED
1	hsa-miR-21	TAGCTTATCAGACTGATGTTGA	+
2	hsa-miR-27b	TTCACAGTGGCTAAGTTCTGCA	+
3	hsa-miR-186	AAAGAATTCTCCTTTTGGGCTT	+
4	hsa-miR-93	AAGTGCTGTTTCGTGCAGGTAGT	+
5	hsa-miR-26a	TCAAGTAATCCAGGATAGGCTG	+
6	hsa-miR-191	AACGGAATCCCAAAAGCAGCTG	+
7	hsa-miR-31	GGCAAGATGCTGGCATAGCTGT	+
8	hsa-miR-92	TATTGCACTTGTCCCGGCCTGT	+
9	GAM3418-A	ATCACATTGCCAGGGATTACCA	+
10	GAM4426-A	GAAGTTTGAAGCCTGTTGTTCA	+
11	GAM281-A	CACTGCACTCCAGCCTGGGCAA	
12	GAM7553-A	TAGGTAGTTTCCTGTTGTTGGG	+
13	GAM5385-A	TCACAGTGAACCGGTCTCTTTC	+
14	GAM2608-A	TAAGGTGCATCTAGTGCAGTTA	
15	GAM1032-A	CTAGACTGAAGCTCCTTGAGGA	+
16	GAM3431-A	TAATACTGCCGGGTAATGATGG	
17	GAM7933-A	TAGCAGCACATAATGGTTTGAA	
18	GAM3298-A	AAAGTGCTCATAGTGCAGGTAG	+
19	GAM7080-A	TTTCCACAGCGGCCAATTCTTC	+
20	GAM895-A	AGCTGCCAGTTGAAGAACATTT	
21	GAM3770-A	AAGTTAAGAGCTCCAGGCCTG	
22	GAM337162-A	ACTGCACTCCAGCCTGGGCAAC	+
23	GAM8678-A	GTGTTCCAGGAAGTCGTCTTGA	
24	GAM2033-A	TCAAGCTCATTCTCTAACCTC	
25	GAM7776-A	CATTGCACTCCAGCCTGGGCAA	+
26	GAM8145-A	ACATGATCTCCTCACTCTAGGA	
27	GAM25-A	AATTGCTTGAACCCAGGAAGTG	+
28	GAM7352-A	TGTTTAAGTAGCTTATTTATCT	
29	GAM337624-A	TCTAAGAGAAAGGAAGTTCAGA	+
30	GAM1479-A	GAAGGCAGTAGGTTGTATAGTT	+
31	GAM2270-A	ATCACATTGCCAGTGATTACCC	+
32	GAM7591-A	TTGGAGTAATTCAGTATAGGTT	+
33	GAM8285-A	AGTAGACAGTGGCAACATAGTC	
34	GAM6773-A	CTAGCCTGTTTGTCTCACCCC	+
35	GAM336818-A	TGAGGTGGGATCCCGAGGCC	+
36	GAM336487-A	TGGCTAGGTAAGGGAAG	+
37	GAM337620-A	AATCATCATTATTTGAAGTTTA	+
38	GAM336809-A	TAAGGCATTTTTATGGT	+
39	GAM5346-A	GCTGTTGTTAAGGGCACTTGGG	
40	GAM8554-A	TTCATGGGAGCAGGTGGTACAG	
41	GAM2701-A	ACTGCACTCCAGTCTGGGTGAC	
42	GAM7957-A	TCACTGCAACCTCTGCCTCCCG	
43	GAM391-A	CAGATCACATCCATCCGTCACC	
44	GAM6633-A	GCACTCAAGCCTGGGTTACAGA	
45	GAM19	AGAGAGTGGCAGGTCTGTTCTT	
46	GAM8358-A	GATGAGGCAGCACTTGGG	
47	GAM3229-A	TGAGGTGGGAGAATTGCTTGAA	
48	GAM7052-A	CATGTAATCCCAGCTACTCAGG	
49	GAM3027-A (mmu-MIR-29c)	TAGCACCATTTGAAATCGGTTA	+
50	GAM21 (mmui-MIR-130b)	CAGTGCAATGATGAAAGGGCAT	+
51	GAM oligonucleotide(mmu-MIR-30e)	TGTAAACATCCTTGACTGGAAG	+

FIG. 14A

Chr 9
3'



FIG.
14B

N2
5' G A CAGT C--- G C--- CC \
3' CCC TG GGAA GGC GGGATT TC CAGGG CCCCTT
GGG AC CCTT CCG CCTGA AG GTCCT GGGGGA A
- - - - - AAAC G TTCA CCA CG

N3
5' AC- TA ACA - - - - - AG
3' CTC CTGTTTGC GCATA GGC GTG AAGG CCGC T
GGG GACAGACG TGTGT CCG CCG TTCC GCG G
CAC - - GAC AAGG C TGCG CT

MIR23
5' -- C GTGACT T
3' ACC TAGGGACCGT AC ACTAAA A
AT T - ATTAGA

GAM22
5' - CACT - - - - - T A ACA - - - G- - - - - -GG
3' GGTCG CGCT GCA GAT GG GA GGT GCATCT C TAGCT CTCTTT A
CCAGT GCGA CGT CTG CC CT CCA CGTAGA G GTCGA GAAGAAA A
A CC- ATTATTTC - A GG- CT A GA CCACC ACA

GAM116
5' AACA ATTG TGAT T
3' CTCT AGGTGCAGAGCTTAGCTG GTGAACAG TGG \
GAGA FCCACGTCTTGAATCGGT CACTTGT GCG T
AG- GA- TC- T

N4
5' GGGG G AGCGC G A TT G
3' TG CA TTAAGTTGG TG GGCAG GCGG GCT A
GC GT GGTGACT AC TCGTC CCGC CCG C
- - - - - G GAC- - - - - G G - - - - - G

N0
5' GGTCAAATGTATTGAAAGTTGCAAAATCTTCTTACAAA
3' AAACAAAACCAATGCATCACCTAAGTOGTGTGAAATCA

N6
5' TG -- C -- GG T G T
3' GGC TG A GCGGG GGGG CG GC TTCGGAG AGC C
CTGAC T TGTCT TCTC GT CG GGGTCTT TTG C
GT TA C AA GG C G T

MIR24
5' G G A TA TCTCAT \
3' CTC GT CCT CTGAGCTGA TCACT
GAGG CA GGA GACTTGACT GGTCA C
A A C C- CACATT

N7
5' - AT T AAA AG - - - - - T
3' TAGC AGCT TGTG ACGC GCGTG TACA GCC TG C G
GTCG TCGG ACAC TGCG CCGAC GTGT CCG AC G G
C C- - AC- GA GCAC T T T

FIG. 14C

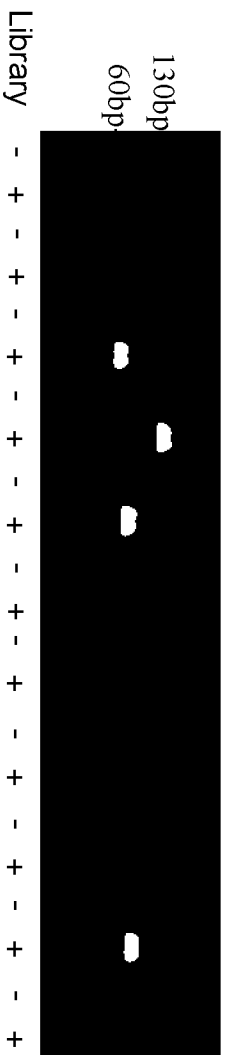


FIG. 15C

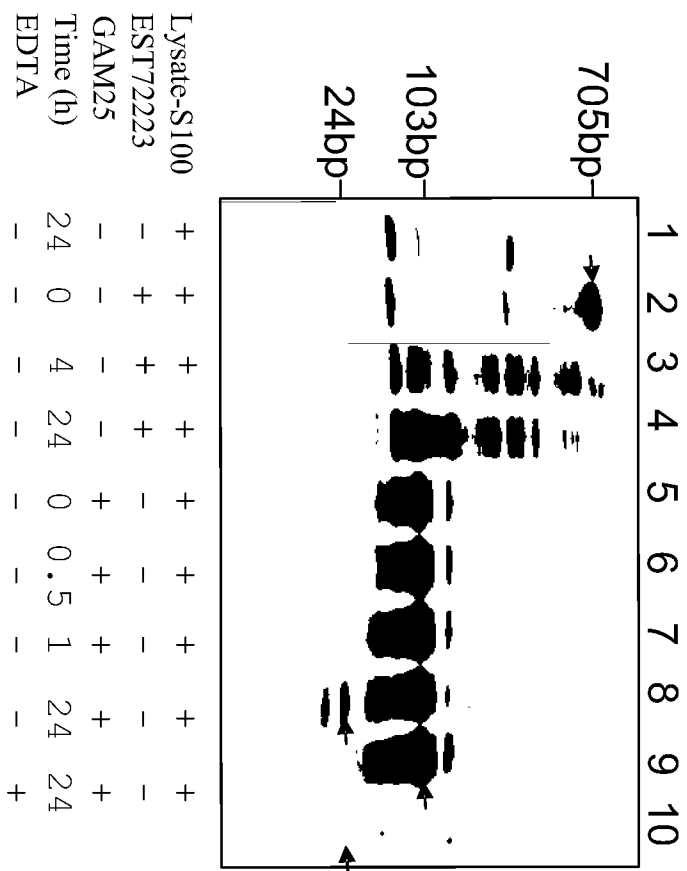


FIG. 15D

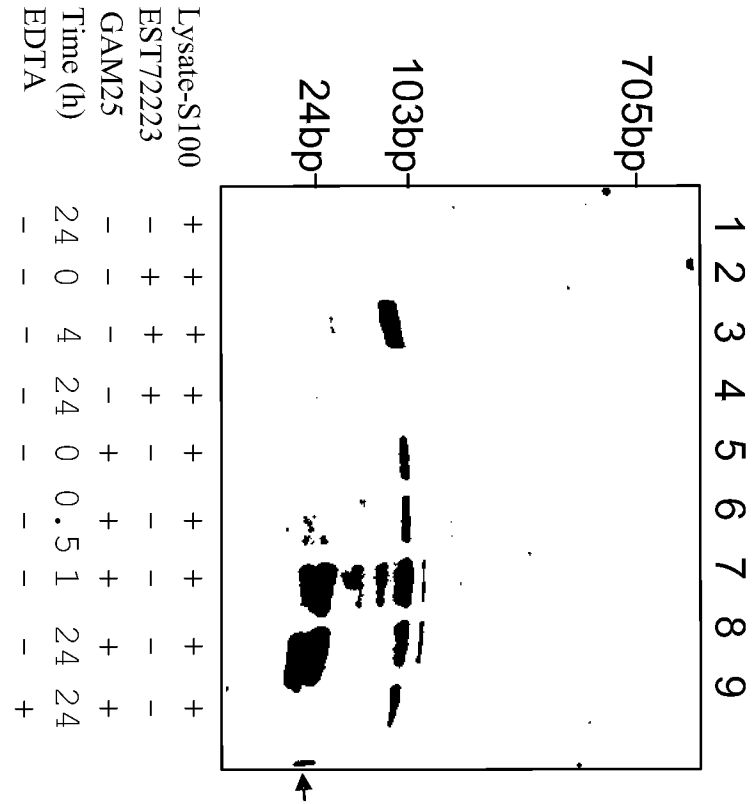


FIG. 16A

5'UTR SEQUENCE (5' TO 3') OF HIV-1(U5-R)

GGTCTCTCTGGTTAGACCAGATCTGAGCCTGGGAGCTCTCTGGCTAACT
AGGGAACCCACTGCTTAAGCCTCAATAAAGCTTGCCTTGAGTGCTTCAAGTA
GTGTGTGCCCGTCTGTTGTGTGACTCTGGTAACTAGAGATCCCTCAGACCCTT
TTAGTCAGTGTGGAAAATCTCTAGCAGTGGCGCCCGAACAGGGACCTGAAAG
CGAAAGGGAAACCAGAGGAGCTCTCTCGACGCAGGACTCGGCTTGCTGAA
GCGCGCACGGCAAGAGGCGAGGGGCGGCGACTGGTGAGTACGCCAAAAA
TTTTGACTAGCGGAGGCTAGAAGGAGAGAG

FIG. 16B

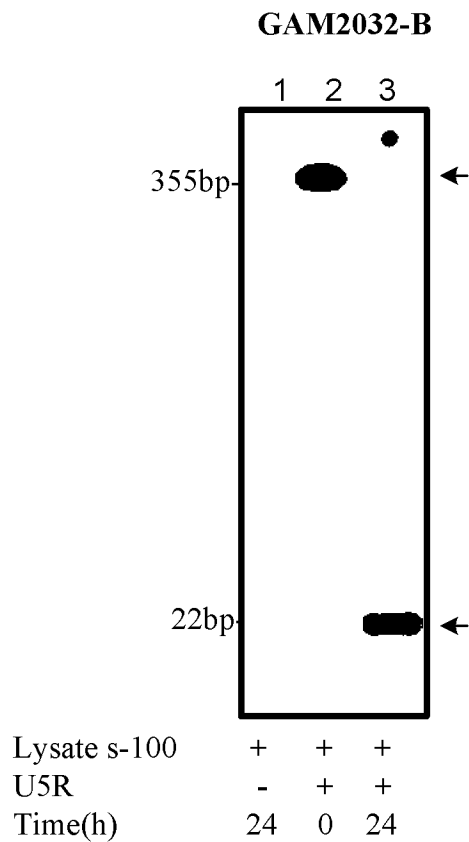


FIG. 16C

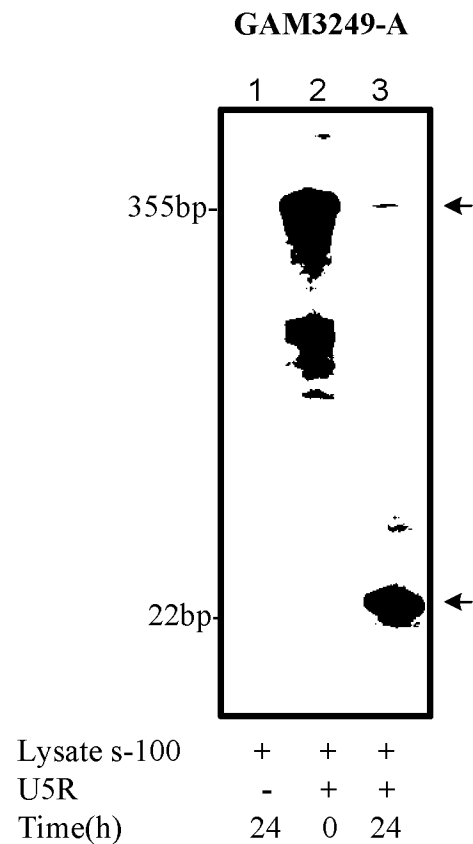


FIG.16D

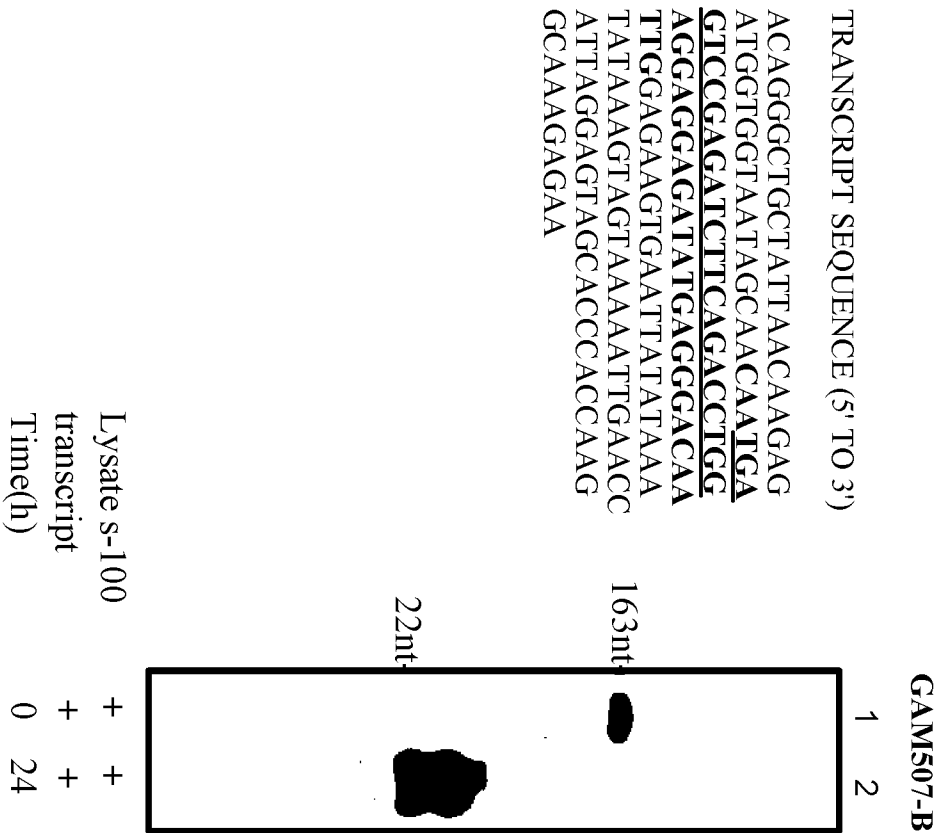


FIG.16E

